

Amendments to the Specification:

Please replace paragraph [0013] with the following amended paragraph:

Firstly, with reference to Fig. 5, description will be given below in brief of the circuit configurations of an arc welding control unit according to the present embodiment of the invention. Fig. 5 is a circuit diagram of the circuit configurations of the arc welding control unit according to the present embodiment. In Fig. 5, a portion thereof shown by a one-dot chained line and given reference character 20 is a primary side inverter circuit, 28 designates a power transistor used as an inverter (switching means) in the primary side inverter circuit 20, 21 stands for a main transformer, ~~a portion shown by a two-dot chained line and given reference character 22 is a secondary side main circuit~~ a portion 22a shown by a two-dot chained line is a secondary side main circuit, 23 designates a dc reactor, and 24 stands for a control circuit.

Please replace paragraph [0014] with the following amended paragraph:

Now, description will be given below in brief of the operation of the present embodiment with reference to the above circuit configurations. Power supplied from a commercial power supply 25 is rectified by a primary rectify diode 26 in the primary side inverter circuit 20, and the thus rectified power is smoothed and converted to a direct current by a primary smoothing capacitor 27. And, the voltage and current are inverter controlled by the power transistor 28 so as to provide the voltage and current of a desired high frequency. Further, the voltage is raised from the primary side to the secondary side by the main transformer 21, the current is converted again to a direct current by a secondary side rectify diode 22b, positive and negative voltages are respectively output, and arcs are discharged between a wire 30 and a base metal 29 for enforcing arc welding. By the way, the dc reactor 23 in the secondary side circuit cuts high frequency components to improve the quality of the arc welding. Also, the control circuit 24 is used to

control the output voltage and current in the primary side inverter circuit 20 and in the secondary side main circuit 22a in order to stabilize the quality of the arc welding.

Please replace paragraph [0015] with the following amended paragraph:

Next, description will be given below of a heat radiating unit used in the arc welding control unit according to the present embodiment with reference to Fig. 1. A heat radiating unit 1 carries thereon the primary side inverter circuit 20, secondary side main circuit ~~22~~ 22a and the like previously described with reference to Fig. 5, and is disposed in the form of a unit in the arc welding control unit. The heat radiating unit 1 has a heat radiating mechanism in order to cool the power transistor 28 and the like which give off intense heat.

Please replace paragraph [0019] with the following amended paragraph:

Also, Fig. 3, similarly to the above figures, is a perspective view of the heat radiating unit 1, when viewed from the forward and rightward direction thereof. In Fig. 3, 40 designates a switching element which, although not shown in the circuit diagram of Fig. 5, is used in a secondary side main circuit 22a and gives off intense heat.

Please replace paragraph [0020] beginning on page 6, line 1, with the following amended paragraph:

And, Fig. 4, similarly to Fig. 3, is a perspective view of the heat radiating unit 1, when viewed from the forward and rightward direction thereof; and, for easy understanding of the inside thereof, it is shown in such a manner that the middle portion thereof is cut. In Fig. 4, 6 designates heat sinks and 7 stands for heat radiating fins. The heat sinks 6 are respectively included in the respective electrical elements of the power transistor 28, secondary side switching

element 40 and secondary side rectify diode ~~22~~ 22b; and, the portions thereof including the heat radiating fins 7 are exposed to the inside of the heat radiating unit 1 having a tunnel structure, that is, to the portion of the cavity portion 3 through which the air is allowed to flow. Also, the heat radiating unit 1 has cavity portions respectively in the two upper and lower stage structure; in each stage structure, there are provided two or more rows of cavities separated from one another with partitions between them; and, the respective cavity portions 3 are formed to allow the air to flow therethrough.

Please replace paragraph [0022] with the following amended paragraph:

By the way, in this case, as shown in Fig. 4, in the heat sinks ~~8~~ 6, the two or more heat radiating fins 7 should be disposed to be substantially parallel with the direction of flow of the air flowing through the cavities 3, thereby being able to prevent the flow of the air from stagnating.

Please replace paragraph [0024] with the following amended paragraph:

In this manner, the side surface portion 4a and top surface portion 4b defining the outer peripheral surface of the heat radiating unit 1 are respectively formed as flat surfaces capable of shutting off the air, the flow of the air between the cavity portions 3 defined by these flat surfaces and the outside is cut off. Further dust, welding fumes and the like can be prevented from entering the conductive ~~portions of the interior portions~~ portion inside of the power source unit, where is outside of the tunnel structure of the heat radiating unit 1.

Please insert the following paragraphs on page 3, line 20, before “BEST MODE FOR CARRYING OUT THE INVENTION”:

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a perspective view of a heat radiating unit used in an arc welding control unit according to an embodiment 1 of the invention, when viewed from the backward and rightward direction thereof.

Fig. 2 is a perspective view of a heat radiating unit used in an arc welding control unit according to the embodiment 1 of the invention, when viewed from the forward and leftward direction thereof.

Fig. 3 is a perspective view of a heat radiating unit used in an arc welding control unit according to the embodiment 1 of the invention, when viewed from the backward and rightward direction thereof.

Fig. 4 is a perspective view of a heat radiating unit used in an arc welding control unit according to the embodiment 1 of the invention, when viewed from the backward and rightward direction thereof.

Fig. 5 is a circuit diagram of the circuit configurations of an arc welding control unit according to the embodiment 1 of the invention.

Fig. 6 is a perspective view of an arc welding control unit according to the embodiment 1 of the invention, when viewed from the backward and rightward direction thereof.

Fig. 7 is a perspective view of an arc welding control unit according to the embodiment 1 of the invention, when viewed from the forward and rightward direction thereof.

Fig. 8 is a perspective view of a conventional arc welding control unit, when viewed from the backward and rightward direction thereof.

Please delete the heading "DESCRIPTION OF REFERENCE CHARACTERS" on page 10, line 10.

Please delete paragraph [0036], beginning on page 10, line 11, and ending on page 11, line 1.